



Patent
Attorney Docket No. 05725.0306-00
Application No.: 09/083,150
Customer No. 22,852

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)	
)	
Boudiaf BOUSSOUIRA et al.)	
)	
Application No.: 09/083,150)	Group Art Unit: 1617
)	
CPA Filed: March 29, 2001)	Examiner: Edward J. WEBMAN
)	
For: COSMETIC USE OF SELECTED)	
POLYAMINO POLYMERS AS)	
ANTIOXIDANTS)	

Mail Stop Appeal Brief- Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPEAL BRIEF UNDER 37 C.F.R. § 1.192

This is an appeal to the Board of Patent Appeals and Interferences ("the Board") from the Office Action dated August 29, 2003, rejecting claims 1-28, 33-35, and 37 in the above-referenced patent application. According to 35 U.S.C. § 134(a), Appellants can file this appeal despite the fact that the Office Action dated August 29, 2003, is non-final, because the claims have been rejected at least twice in this case. The appealed claims, as rejected, are set forth in the attached Appendix.

In support of the Notice of Appeal filed November 26, 2003, the period for response extended by the Petition for Extension of Time and fee, filed concurrently

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herewith, and pursuant to 37 C.F.R. § 1.192, Appellants present in triplicate this brief and enclose herewith a check for the fee of \$330.00 required under 37 C.F.R. § 1.17(c). If any additional fees are required or if the enclosed payment is insufficient, Appellants request that the required fees be charged to Deposit Account No. 06-0916.

I. Real Party in Interest

L'Oréal, S.A. is the assignee of record.

II. Related Appeals and Interferences

Appellants' undersigned legal representative knows of no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-44 are pending in this application. Claims 29-32, 36, and 38-44 were withdrawn from consideration by the Examiner because they are directed to nonelected subject matter.

IV. Status of Amendments

No amendment to the claims nor any response has been filed subsequent to the Office Action dated August 29, 2003.

V. Summary of Invention

This invention relates to use of at least one polyamino polymer as an antioxidant. Specification, page 1, lines 8-9. Specifically, this invention relates to a cosmetic and/or dermatological composition comprising, in a cosmetically and/or dermatologically acceptable support, at least one nanopigment and at least one polyamino polymer chosen from polyalkylenepolyamine polymers (i)-(ix). *Id.* at page 6, lines 1-17; e.g., claim 1. In addition, this invention relates to an antioxidant composition comprising the at least one polyamino polymer chosen from polyalkylenepolyamine polymers (i)-(ix), wherein the at least one polyamino polymer is present in an amount effective to inhibit light-induced peroxidation of proteins, protein derivatives, and lipids. Claim 37. Also disclosed and claimed by Appellants are processes, such as treatment processes, using these compositions. Specification, page 31, line 16 - page 32, line 4.

When applied to skin, photoprotective compositions comprising at least one screening agent are known to limit the peroxidation of unsaturated lipids and proteins. *Id.* at page 3, line 20 - page 4, line 1. Among the screening agents, nanopigments of metal oxides are increasingly used in skin and hair products because of their abilities to scatter and reflect ultraviolet radiation. *Id.* at page 4, lines 2-7. However, light irradiation of compositions comprising metal oxide nanopigments can catalyze the oxidation of oxidation-sensitive organic compounds, such as proteins of the skin. *Id.* at page 4, lines 8-15. In addition, compositions comprising metal oxide nanopigments can be instable to light. *Id.* at page 4, lines 16-19.

To solve these problems, surface-treated pigments to limit the light-induced activities have been invented; but they are generally not satisfactory. *Id.* at page 5, lines 9-15.

The present inventors have discovered that certain polyamino polymers can serve as antioxidants and can solve at least one of these problems by combining at least one of those polyamino polymer with nanopigments. The results are novel compositions comprising the combination of the at least one polyamino polymer with nanopigments or comprising the at least one polyamino polymer alone, which can inhibit photo-peroxidation of lipids induced by nanopigments and/or can inhibit the light-induced peroxidation of lipids and proteins, such as proteins of the skin. *Id.* at page 1, lines 9-20.

VI. Issues

The issues presented for appeal are as follows:

1. Whether claims 1-23, 27, 28, and 33-35 are patentable under 35 U.S.C. § 103(a) over *Wolf et al.* (U.S. Patent No. 5,449,519) ("*Wolf*") in view of *Fanchon et al.* (U.S. Patent No. 5,679,374) ("*Fanchon*");
2. Whether claim 37 is patentable under 35 U.S.C. § 103(a) over *Wolf* in view of *Fanchon*; and
3. Whether claims 24-26 are patentable under 35 U.S.C. § 103(a) over *Wolf* in view of *Fanchon* and further in view of *Garrison et al.* (U.S. Patent No. 5,569,651) ("*Garrison*").

VII. Grouping of Claims

Each claim of this patent application is separately patentable, and upon issuance of a patent will be entitled to a separate presumption of validity under 35 U.S.C. § 282. For convenience in handling this appeal, however, the claims will be grouped as set forth below, and arguments supporting these groupings are contained in the “Arguments” section of this Appeal Brief.

Claims 1-23, 27, 28, and 33-35 stand or fall together with respect to the § 103(a) rejection over *Wolf* in view of *Fanchon*.

Claim 37 stands or falls alone with respect to the § 103(a) rejection over *Wolf* in view of *Fanchon*.

Claims 24-26 stand or fall together with respect to the § 103(a) rejection over *Wolf* in view of *Fanchon* and further in view of *Garrison*.

VIII. Arguments

A. Claims 1-23, 27, 28, and 33-35 are patentable under 35 U.S.C. § 103(a) over *Wolf* in view of *Fanchon*

The Examiner rejected claims 1-23, 27, 28, and 33-35 under 35 U.S.C. § 103(a) as being unpatentable over *Wolf et al.* (U.S. Patent No. 5,449,519) (“*Wolf*”) in view of *Fanchon et al.* (U.S. Patent No. 5,679,374) (“*Fanchon*”). Office Action dated August 29, 2003, pages 2-3; also e.g., Office Action dated April 10, 2002, pages 2-3. Appellants maintain that a prima facie case of obviousness has not been established for the reasons set forth below.

To establish a prima facie case of obviousness, three basic criteria must be met, including that (1) the prior art reference must teach or suggest all the claim limitations; and (2) there must be some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references. M.P.E.P. § 2143 "Both the suggestion and the reasonable expectation of success must be found in the prior art reference, not in the applicant's disclosure." *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991).

1. Neither *Wolf* Nor *Fanchon* Teaches or Suggests the Presently Claimed at Least One Polyamino Polymer

First, the Examiner failed to establish that either *Wolf* or *Fanchon* teaches or suggests the at least one polyamino polymer chosen from polyalkylenepolyamine polymers (i) - (ix), as claimed in, for example, claim 1 of the present invention.

The Examiner never contended that *Fanchon* teaches or suggests the presently claimed at least one polyamino polymer. The Examiner merely contended that *Wolf* discloses "an anti-acne composition comprising 0.01-25% of a carrier complexed to active (abstract). 40%-50% carrier is specified (column 4 lines 11-13). Dendritic polymers are specified (column 3 lines 42-44)." Office Action dated August 29, 2003, page 2 (emphasis added); *also e.g.*, Office Action dated February 26, 2003, page 2. Further, the Examiner contended, without providing any supportive evidence, that "a complex is not formed by a chemical reaction wherein the structure of the polymer is changed by covalent bonding, but rather, by mere mixing, wherein the b[o]nding is non covalent and the polymer remains chemically unchanged." Office Action dated August

29, 2003, page 3 (emphasis original). Appellants disagree for at least the following reasons.

Wolf discloses a composition comprising “a keratolytic compound complexed to a carrier molecule.” Col. 1, lines 58-61. The carrier molecule can be chosen from synthetic polymers, such as polyaminoamines. Col. 2, lines 53-62; col. 3, line 39-col. 4, line 10. Further, *Wolf* states that “[i]t has most unexpectedly been discovered that if keratolytic compounds, particularly those known to also have anti-acne activity are bound to a certain carrier molecules, the resulting complex will remain stable in cosmetic preparations.” Col. 2, lines 3-7 (emphasis added). *Wolf* also teaches that “[t]he salicylic acid [*i.e.*, a keratolytic compound] will react with the free amino groups on the carrier molecule to form a complex.” Col. 3, lines 15-17 (emphasis added). Therefore, contrary to the Examiner’s unsupported contention that the complex disclosed in *Wolf* is formed merely by mixing, the complex in *Wolf* is formed by a bonding reaction between the carrier molecule and a keratolytic compound.

Thus, while the complex of *Wolf* may use a polyamino amine as a starting material to form the complex, the formed complex is outside the scope of the presently claimed at least one polyalkylenepolyamine polymer. Accordingly, the complex disclosed in *Wolf* is different from the at least one polyamino polymer as claimed in, for example, claim 1, of the present invention.

In addition, the Examiner contended that the complex disclosed in *Wolf*, “when placed in water, such as in example 6, dissociates to an extent dependent on a dissociation constant, wherein a portion of the polymer is unbound.” Office Action dated August 29, 2003, page 3. However, the Examiner failed to provide any evidence

showing that “a portion of the polymer is unbound” when placed in water. Instead, *Wolf* teaches that “[w]hen the complex is applied to the skin in a cosmetic composition, the keratolytic compound becomes disassociated from the carrier molecule on the skin and is absorbed into the skin to provide the desired anti-acne effect.” Col. 2, lines 7-11 (emphasis added). Therefore, *Wolf* discloses that its composition must have the complex of a keratolytic compound and a carrier molecule, but not necessarily unbound carrier molecule, thus fails to disclose the claimed at least one polyalkylenepolyamine polymer.

2. Objective Evidence of Suggestion or Motivation to Combine Is Absent Here

Additionally, the Examiner failed to provide any evidence of motivation or suggestion to combine *Wolf* and *Fanchon* to arrive at the presently claimed invention.

The threshold for establishing a teaching, motivation or suggestion to modify or combine prior art references is high. The Federal Circuit has clearly stated that the evidence of a teaching, suggestion, or motivation to modify or combine references must be “clear and particular.” *In re Dembicziak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Further, the Examiner can satisfy the burden of establishing a prima facie case of obviousness “only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (citations omitted) (emphasis added). Finally, the Federal Circuit has reaffirmed the Examiner’s high burden to establish a prima facie case of obviousness and has emphasized the requirement of specificity. See *In re Sang-Su Lee*, 277 F.3d

1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). In *Lee*, the Federal Circuit held that “[t]he factual inquiry whether to combine references must be thorough and searching. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with.” *Id.* 277 F.3d at 1433 (emphasis added).

Here, the Examiner failed to provide any objective evidence of suggestion or motivation to combine *Wolf* and *Fanchon*, let alone “clear and particular” evidence or specificity of factual inquiry of such.

The Examiner merely contended that because *Fanchon* discloses “anti-acne compositions containing antioxidants and nanopigments as active agents (title, Abstract, column 7 lines 7-9, 11, 13, 29-30), and both *Wolf* and *Fanchon* are related to anti-acne compositions, it would have been obvious for one of ordinary skill in the art “to add an antioxidant and nanopigments to the composition” of *Wolf* to “achieve the beneficial effect of additional anti-acne active[ness] in view of *Fanchon*[.]” Office Action dated August 29, 2003, page 2; see also e.g., Office Action dated February 26, 2003, page 3; Office Action dated April 10, 2002, page 2. Appellants disagree for at least the following reasons.

a. No Evidence of Suggestion or Motivation to Choose the Presently Claimed at least One Polyamino Polymer or at least One Nanopigment

The Examiner failed to provide any evidence of suggestion or motivation to choose the presently claimed at least one polyamino polymer, *i.e.*, polyalkylenepolyamine, from the numerous polymers disclosed in *Wolf* served as the carrier molecule. Instead, the Examiner never contended that *Wolf* specifically

discloses or suggests polyalkylenepolyamines. *Fanchon* does not cure the deficiencies of *Wolf*.

Instead, *Fanchon* discloses a composition, which can comprise antioxidants and nanopigments. The Examiner failed to provide any evidence of suggestion or motivation to choose nanopigments from various active ingredients disclosed in *Fanchon*. *Fanchon*'s composition can comprise various other active ingredients, such as retinal (vitamin A) and derivatives thereof, antiseptic agents, anti-seborrheic agents, antimicrobial agents, non-steroidal anti-inflammatory active agents, steroidal anti-inflammatory active agents, keratolytic agents, protective agents, moisturizing agents, screening agents, pigments and nitroxide radicals. Col. 6, line 13 - col. 7, line 34. If following the Examiner's arguments, any one of the active ingredients disclosed in *Fanchon* could have been obvious to be chosen and combined with *Wolf*'s composition.

Without the blueprint of the present invention, the Examiner failed to provide any evidence to pick and choose the antioxidants and nanopigments disclosed in *Fanchon* and combine them with *Wolf*'s composition, in particular in view of the additional facts as follows:

- (1) *Fanchon* nowhere discloses that its antioxidants include polyamino polymers; and
- (2) *Fanchon* states that "[p]igments or nanopigments may also be used." Col. 7, lines 29. Therefore, the use of nanopigments, as disclosed in *Fanchon*, is not a must, but merely an option.

Using an applicant's disclosure as a blueprint to reconstruct the claimed invention from isolated pieces of the prior art references contravenes the statutory

mandate of § 103, which requires determining obviousness at the time the invention was made. See *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988). Therefore, the Examiner failed to meet the burden of proof for this improper obviousness rejection.

In addition, picking and choosing among isolated disclosures in the references to deprecate the claimed invention amounts to improper hindsight reconstruction and is prohibited under section 103. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). The Examiner clearly adopted a hindsight approach, which is improper.

b. The Examiner Adopted an Improper Obvious-to-try Approach

At best, the Examiner's assertion of obviousness is based on what was obvious to try. In moving from the prior art to the claimed invention, however, one cannot base a determination of obviousness on what the skilled person might try or find obvious *to try*. Rather, the proper test requires determining what the prior art would have led the skilled person *to do*. The Federal Circuit has given some examples of what would constitute an "obvious to try" modification based on the prior art. See *In re O'Farrell*, 853 F.2d 894, 7 U.S.P.Q.2d 1673 (Fed. Cir. 1988). For example, "what was 'obvious to try' was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it." *Id.* at 903, 7 U.S.P.Q.2d at 1681 (citations omitted).

In the present case, *Wolf*, at best, provides only a general guidance to use synthetic polymers, such as polyaminoamines, as a starting material to form a complex for use in an anti-acne composition. *Fanchon*, at best, provides only a general guidance to use active agents conventionally used in the cosmetic or dermatological field in a cosmetic composition, such as an anti-acne composition. It may have been, at best, obvious to try each synthetic polymer disclosed in *Wolf* to form a complex, and each active agent, such as antioxidants and nanopigments, disclosed in *Fanchon* and combine them in an attempt to arrive at the claimed invention. Such an obvious-to-try standard, however, does not support a rejection under section 103. See *Ecolochem, Inc. v. Southern Cal. Edison Co.*, 227 F.2d 1361, 1371, 56 U.S.P.Q.2d 1065, 1075 (Fed. Cir. 2000).

Therefore, this rejection is improper and should be reversed and withdrawn.

**B. Claim 37 is patentable under 35 U.S.C. § 103(a)
over *Wolf* in view of *Fanchon***

The Examiner rejected claim 37 under 35 U.S.C. § 103(a) as being unpatentable over *Wolf* in view of *Fanchon*. Office Action dated August 29, 2003, pages 2-3; also e.g., Office Action dated April 10, 2002, pages 2-3. Appellants maintain that a prima facie case of obviousness has not been established for the reasons set forth below.

As discussed above in section VIII.A.1, neither *Wolf* nor *Fanchon* teaches or suggests the at least one polyamino polymer chosen from polyalkylenepolyamine polymers (i) - (ix), as claimed in, for example, claim 37 of the present invention.

Further, as discussed above in section VIII.A.2.a, the Examiner failed to provide any evidence of suggestion or motivation to choose the presently claimed at least one

polyamino polymer, *i.e.*, polyalkylenepolyamine, from the numerous polymers disclosed in *Wolf* served as the carrier molecule.

In addition, neither *Wolf* nor *Fanchon* teaches or suggests that the “polyamino polymer is present in an amount effective to inhibit light-induced peroxidation of proteins, protein derivatives, and lipids” as recited in claim 37 of the present invention. The Examiner merely contended that *Wolf* “teaches amounts [of the carrier molecule], which read on those claimed.” Office Action dated August 29, 2003, page 3. However, *Wolf* nowhere teaches or suggests that its carrier molecule can serve as antioxidants of “proteins, protein derivatives, and lipids” and *Fanchon* nowhere discloses that its antioxidants include polyamino polymers.

Instead, *Wolf* teaches that “due to the acidic nature of [keratolytic compounds, such as salicylic acid], they often exert undesirable effects on the carrier formulation.” Col. 1, lines 42-44. Therefore, *Wolf* disclosed the use of the carrier molecule to complex with the keratolytic compounds to enhance “the stability and aesthetics of the cosmetic preparation.” Col. 2, lines 3-15. In other words, *Wolf* teaches that the carrier molecule can be used to complex with the keratolytic compounds to prevent the undesirable effects caused by the keratolytic compounds. Accordingly, *Wolf* teaches away from the present invention. The Examiner must consider the prior-art reference in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. M.P.E.P. § 2141.02 (citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983)) (emphasis in original).

Therefore, this rejection is improper and should be reversed and withdrawn.

C. Claims 24-26 are patentable under 35 U.S.C. § 103(a) over *Wolf* in view of *Fanchon* and further in view of *Garrison*

The Examiner rejected claims 24-26 under 35 U.S.C. § 103(a) as being unpatentable over *Wolf* in view of *Fanchon* and further in view of *Garrison*. Office Action dated August 29, 2003, pages 2-3; *also e.g.*, Office Action dated April 10, 2002, page 3. Appellants maintain that a prima facie case of obviousness has not been established for the reasons set forth below.

The Examiner merely contended that because *Garrison* discloses “the chelator EDTA in anti-acne compositions to sequester discoloration-causing metal ions[] ([c]olumn 4 lines 3-4),” it would have been obvious for one of ordinary skill in the art “to add a EDTA to the compositions [of *Wolf* and *Fanchon* to prevent] discoloration in view of *Garrison*[.]” Office Action dated August 29, 2003, pages 2-3; *also e.g.*, Office Action dated April 10, 2002, page 3.

As discussed above in section VIII.A., *Wolf* and *Fanchon* fail to provide all limitations of the present claims, and additionally fail to provide any evidence of suggestion or motivation to combine their teachings for making the combination proposed by the Examiner. The mere disclosure of *Garrison* relied upon by the Examiner for its disclosure of EDTA does nothing to remedy these deficiencies. Therefore, this rejection should be reversed and withdrawn.

IX. Conclusion

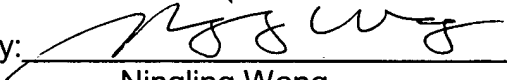
In view of the foregoing, Appellants respectfully request that each rejection be reversed and withdrawn.

Please grant any extensions of time required to enter this Brief and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: February 25, 2004

By: 
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Enclosure: Appendix - Pending Rejected Claims.

APPENDIX - PENDING REJECTED CLAIMS

1. A cosmetic and/or dermatological composition comprising, in a cosmetically and/or dermatologically acceptable support:

- at least one nanopigment in said composition,
- at least one polyamino polymer in said composition selected from:

(A) polyalkylenepolyamine polymers selected from:

- (i) polyalkylenepolyamines;
- (ii) alkyl derivatives of polyalkylenepolyamines;
- (iii) addition products of alkylcarboxylic acids with polyalkylenepolyamines;
- (iv) addition products of ketones and aldehydes with polyalkylenepolyamines;
- (v) addition products of isocyanates and isothiocyanates with polyalkylenepolyamines;
- (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyalkylenepolyamines;
- (vii) quaternized derivatives of polyalkylenepolyamines;
- (viii) addition products of a silicone with polyalkylenepolyamines; and
- (ix) copolymers of dicarboxylic acid and of polyalkylenepolyamines.

2. A cosmetic and/or dermatological composition according to claim 1, wherein said polyalkylenepolyamines comprise from 7 to 20,000 repeating units

3. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one polyamino polymer is selected from polyamino polymers comprising at least 5% of tertiary amine functions.

4. A cosmetic and/or dermatological composition according to claim 3, wherein said at least one polyamino polymer is selected from polyamino polymers comprising at least 10% of tertiary amine functions.

5. A cosmetic and/or dermatological composition according to claim 4, wherein said at least one polyamino polymer is selected from polyamino polymers comprising at least 20% of tertiary amine functions.

6. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one polyamino polymer is selected from:

- (A) (i) hyperbranched polyethyleneimines;
- (ii) quaternized polyethyleneimine derivatives;
- (iii) addition products of alkylcarboxylic acids with polyethyleneimine;
- (iv) addition products of ketones and aldehydes with polyethyleneimine;
- (v) addition products of isocyanates and isothiocyanates with polyethyleneimine;
- (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyethyleneimine;

- (vii) quaternized polyethyleneimine derivatives;
- (viii) addition products of a silicone with polyethyleneimine;
- (ix) copolymers of a dicarboxylic acid and polyethyleneimine; and

(B) polyvinylimidazoles.

7. A cosmetic and/or dermatological composition according to claim 6, wherein said at least one polyamino polymer is selected from:

- (A) (i) hyperbranched polyethyleneimines; and
- (A) (vi) addition products of either ethylene oxide or polyethylene oxide block polymers with polyethyleneimine.

8. A cosmetic and/or dermatological composition according to claim 7, wherein said at least one polyamino polymer is selected from hyperbranched polyethyleneimines.

9. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one nanopigment is selected from metal oxides.

10. A cosmetic and/or dermatological composition according to claim 9, wherein said at least one nanopigment is selected from titanium oxide, zinc oxide, cerium oxide and zirconium oxide.

11. A cosmetic and/or dermatological composition according to claim 10, wherein said at least one nanopigment is titanium oxide.

12. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one nanopigment is present in an amount ranging from 0.1 to 20% by weight relative to the total weight of said cosmetic and/or dermatological composition.

13. A cosmetic and/or dermatological composition according to claim 12, wherein said at least one nanopigment is present in an amount ranging from 0.25 to 15% by weight relative to the total weight of said cosmetic and/or dermatological composition.

14. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one polyamino polymer is present in an amount ranging from 0.05 to 10% by weight relative to the total weight of said cosmetic and/or dermatological composition.

15. A cosmetic and/or dermatological composition according to claim 14, wherein said at least one polyamino polymer is present in an amount ranging from 0.5 to 5% by weight relative to the total weight of said cosmetic and/or dermatological composition.

16. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition further comprises at least one photo-oxidizable fatty substance.

17. A cosmetic and/or dermatological composition according to claim 16, wherein said at least one photo-oxidizable fatty substance is selected from photo-oxidizable fatty substances with iodine values ranging from 5 to 200.

18. A cosmetic and/or dermatological composition according to claim 1, containing a fatty phase including at least one oil and wherein the degree of unsaturation (C) of the fatty phase of said cosmetic and/or dermatological composition, defined by the formula:

$$C = \sum_{i=1}^n [V.I.]_i * [T.H.]_i$$

in which

[V.I.]_i represents the iodine value of the oil i, and

[T.H.]_i represents the weight percentage relative to the total weight of said fatty phase, ranges from 2.5 to 4000.

19. A cosmetic and/or dermatological composition according to claim 18, wherein said degree of unsaturation (C) of the fatty phase of said composition ranges from 50 to 4000.

20. A cosmetic and/or dermatological composition according to claim 16, wherein said at least one photo-oxidizable fatty substance is present in an amount ranging from 0.5 to 60% by weight relative to the total weight of said cosmetic and/or dermatological composition.

21. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition further comprises at least one protein or protein derivative.

22. A cosmetic and/or dermatological composition according to claim 1, wherein said composition further comprises at least one oil.

23. A cosmetic and/or dermatological composition according to claim 22, wherein said at least one oil is selected from apricot oil, sweet almond oil, groundnut oil, avocado oil, candlenut oil, borage oil, camellia oil, false flax oil, safflower oil, blackcurrant oil, cereal oil, chayote oil, coconut oil, rapeseed oil, coriander oil, cotton oil, cumin oil, cynara oil, evening primrose oil, perilla oil, cod liver oil, corn germ oil, jojoba oil, kiwi oil, lanolin oil, lychee oil, linseed oil, longan oil, mango oil, hazelnut oil, olive oil, palm oil, passionflower oil, grapeseed oil, cluster pine oil, Italian stone pine oil, pistachio oil, musk rose oil, sesame oil, shorea oil (floor grease), soybean oil, rice bran oil, turtle oil, sunflower oil, whale oil, tea oil, karite butter and vitamin F triglycerides.

24. A cosmetic and/or dermatological composition according to claim 1, wherein said composition further comprises at least one metal-complexing agent.

25. A cosmetic and/or dermatological composition according to claim 21, wherein said at least one metal-complexing agent is selected from 3-ethylenediaminetetra(methylenephosphonic acid), diethylenetriaminepenta(methylenephosphonic acid) and diethylenetriaminepentaacetic acid, and sodium salts thereof.

26. A cosmetic and/or dermatological composition according to claim 25, wherein said at least one metal-complexing agent is present in an amount ranging from 0.005% to 0.1% by weight relative to the total weight of said cosmetic and/or dermatological composition.

27. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition is in the form of an oil-in-water or water-in-oil emulsion, a solution, a gel, a vesicular dispersion, a solid, a foam, a mousse, or a spray.

28. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition further comprises at least one conventional cosmetic adjuvant.

33. A cosmetic or dermatological composition for protecting the human epidermis or the hair against ultraviolet rays comprising at least one nanopigment in said composition and at least one polyamino polymer in said composition as defined in claim 1.

34. A cosmetic or dermatological composition according to claim 33 wherein said composition is an antisen composition or a make-up product.

35. A cosmetic or dermatological composition for combatting or preventing light-induced irritation, inflammation, immunosuppression or acne comprising comprising at least one nanopigment in said composition and at least one polyamino polymer in said composition as defined in claim 1.

37. An antioxidant composition comprising at least one polyamino polymer in said composition selected from:

- (A) polyalkylenepolyamine polymers selected from:
 - (i) polyalkylenepolyamines;
 - (ii) alkyl derivatives of polyalkylenepolyamines;
 - (iii) addition products of alkylcarboxylic acids with polyalkylenepolyamines;
 - (iv) addition products of ketones and aldehydes with polyalkylenepolyamines;

- (v) addition products of isocyanates and isothiocyanates with polyalkylenepolyamines;
- (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyalkylenepolyamines;
- (vii) quaternized derivatives of polyalkylenepolyamines;
- (viii) addition products of a silicone with polyalkylenepolyamines; and
- (ix) copolymers of dicarboxylic acid and polyalkylenepolyamines;

wherein said polyamino polymer is present in an amount effective to inhibit light-induced peroxidation of proteins, protein derivatives, and lipids.